

REMARKS/ARGUMENTS

Claims 1, 3, and 4 are pending in the present application.

This Amendment is in response to the final Office Action mailed December 29, 2009. In the Final Office Action, the Examiner rejected claims 1-4 under 35 U.S.C. §102(b). Applicant has amended claim 1. Reconsideration in light of the amendments and remarks made herein is respectfully requested.

Rejection Under 35 U.S.C. § 102

In the final Office Action, the Examiner rejected claims 1, 3, and 4 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 6,127,970 issued to Lin ("Lin"). Applicant respectfully traverses the rejection and submits that the Examiner has not met the burden of establishing a *prima facie* case of anticipation.

Lin fails to disclose, at least, (1) a satellite subsystem standard model for simulating operations of physical satellite subsystems; (2) an interface standard model for converting data transmitted from the satellite subsystem standard model and the flight software module; and (3) the interface standard model includes data processing information and data link information, and wherein the data processing information and the data link information are modified when the satellite subsystems standard model is changed, the data processing information being at least one of a data format, a data structure and a data attribute, as recited in independent claim 1.

The Examiner alleges that the integrated GPS/INS system 30, the 6DOF trajectory generator 10 and the Real time GPS/IMU emulator 20 correspond to "a satellite subsystem standard model," "a flight software module," and "an interface standard model," respectively (Office Action, page 3-4). Applicant respectfully disagrees for the following reasons.

(1) a satellite subsystem standard model for simulating operations of physical satellite subsystems

First, Lin merely discloses a coupled real-time GPS/IMU emulation method for positioning and location system wherein IMU measurement models and IMU error models are input into the coupled real time GPS/IMU emulation device 20 according to a real IMU device 32. The real IMU device 32 is used in the integrated GPS/INS system 30 to be tested. The IMU measurement models comprise a gyro measurement model and accelerometer measurement

model (Lin, col. 6, lines 49-62; Figure 1). The integrated GPS/INS system 30 is injected with simulated GPS measurements and IMU simulated electronic signals (Lin, col. 7, lines 22-27; Figure 1).

In contrast, the claim recites “a satellite subsystem standard model for simulating operations of physical satellite subsystems.” *Emphasis Added.* There is no teaching that the integrated GPS/INS system 30 simulates operations of physical satellites subsystems. Instead, using the received simulated GPS measurements and IMU simulated electronic signals, the position and location of the integrated GPS/INS system 30 is determined.

In the Final Office Action, the Examiner contends that Lin discloses the “simulation of the operations of the physical satellite subsystems” and cites Lin, col. 3, lines 11-20. Applicant respectfully disagrees and submits that that portion of Lin merely states:

“Another object of this invention is to provide a coupled real time emulation method for positioning and location system, which is adapted to predict and evaluate the dynamic performance of an global positioning /inertial system through a simulated test that can make the follow on real flight test safer and will greatly reduce the number of the real flight test. Consequently, the operation and test cost of the simulated method is low for it does not need the expensive motion device in the test system. The maintenance of the test system is simplified.” (Lin, col. 3, lines 11-20). *Emphasis Added.*

Applicant submits that Lin further states:

“If the inertial sensor, the global positioning system receiver, and the global positioning/inertial integrated system are installed on-board a ground vehicle such as a car, the tester can still process a motion test by actually driving the ground vehicle in relatively low cost. However, if the vehicle to be test is an aircraft, the cost and labors for actual-fly test are ultimately expensive.” (Lin, col. 1, lines 26-34).

Accordingly, Lin discloses the integrated GPS/INS system 30 simulating the test flights of an aircraft in order to reduce the number of actual-fly tests and rendering the actual-fly tests safer. Applicant submits that an “aircraft” is “a machine or device capable of atmospheric flight” such as “an airplane” (Webster’s II, New Riverside University Dictionary, aircraft). Thus, aircrafts are machines that are able to fly by being supported by the air, or in general, the atmosphere of a planet. Given that satellites are not supported by air or the atmosphere of the planet, satellites cannot be considered “aircrafts.” Thus, Applicant submits that there is no

teaching in Lin of satellite subsystems and moreover, no teaching of the GPS/INS system 30 being used to simulate “the operations of the physical satellite subsystems.”

Therefore, the integrated GPS/INS system 30 cannot correspond to the satellite subsystem standard model.

(2) an interface standard model for converting data transmitted from the satellite subsystem standard model and the flight software module

Second, Lin merely discloses that a real time trajectory data is produced from the 6DOF trajectory generator 10 and is sent to the coupled real time GPS/IMU emulation system 20. The coupled real time GPS/IMU emulation system 20 produces dynamic real GPS measurements and IMU signal which are formatted and processed to produce simulated GPS measurements and IMU simulated electronic signal which are in turn injected into the integrated GPS/INS system 30 (Lin, col. 6, line 63 to col. 7, line 25; Figure 1).

In contrast, the claim recites “an interface standard model for converting data transmitted from the satellite subsystem standard model and the flight software module.” *Emphasis Added.* Given that the coupled real time GPS/IMU emulation system 20 provides GPS measurements and IMU signals to the integrated GPS/INS system 30, which the Examiner alleges to be “the satellite subsystem standard model,” the coupled real time GPS/IMU emulation system 20 does not convert “data transmitted from the satellite subsystem standard model.” In other words, the GPS measurements and the IMU signals being sent to the integrated GPS/INS system 30 (allegedly “the satellite subsystem standard model”) are not the same as data transmitted from the integrated GPS/INS system 30.

Accordingly, since the coupled real time GPS/IMU emulation system 20 does not convert data transmitted from the satellite subsystem standard model, the coupled real time GPS/IMU emulation system 20 cannot correspond to the interface standard model, as delineated in the claim.

In the Final Office Action, the Examiner merely reasserted that Lin discloses “an interface standard model for converting data transmitted from the satellite subsystem standard model and the flight software module,” and cited the same portion of Lin which allegedly teaches this element without providing an adequate answer to our arguments (Final Office

Action, pages 3 and 6). Accordingly, Applicant respectfully submits that the Examiner's rejection is improper because the MPEP states:

Where a claim is refused for any reason relating to the merits thereof it should be "rejected" and the ground of rejection fully and clearly stated. See MPEP § 707.07(d). Where the applicant traverses an objection, the Examiner should, if he or she repeats the rejection, take note of the applicant's argument and answer the substance of it. See MPEP § 707.07(f). It is important for an examiner to properly communicate the basis for a rejection so that the issues can be identified early and the applicant can be given fair opportunity to reply. See MPEP § 706.02(j).

(3) the interface standard model includes data processing information and data link information,... the data processing information being at least one of a data format, a data structure and a data attribute

Third, independent claim 1 recites "the interface standard model includes data processing information and data link information," and "the data processing information and the data link information are modified when the satellite subsystems standard model is changed." As discussed above, the coupled real time GPS/IMU emulation system 20, cannot be the interface standard model and the integrated GPS/INS system 30 cannot be the satellite subsystems standard model. Even assuming coupled real time GPS/IMU emulation system 20 is the same as the interface standard model, there is no teaching of that the coupled real time GPS/IMU emulation system 20 includes data processing information and data link information.

In the Final Office Action, the Examiner alleges that Lin discloses the coupled real time GPS/IMU emulation system 20, allegedly "the interface standard model," "includes data processing information and data link information" because Lin discloses:

"The Ethernet network controller board 21, as shown in FIG. 2, is used to receive real time vehicle flight trajectory data from the 6DOF trajectory generator 10. The 6DOF trajectory generator 10 and the real time IMU emulation system 20 can also be connected by a standard serial communication port such as RS-422/485, according to the application requirement." (Lin, col. 12, lines 54-60).

The Examiner alleges that "the data processing information is just the data passed on to the various components as necessary [in Lin]" (Final Office Action, page 7). Applicant respectfully disagrees but in order to further clarify this aspect of the invention, independent claim 1 has been amended to recite "the data processing information being at least one of a data

format, a data structure and a data attribute.” (See Specification, par. [0025]-[0027], for further details.) Applicant submits that there is no teaching in Lin of “the data passed on to the various components” (allegedly, “the data processing information”) “being at least one of a data format, a data structure and a data attribute.”

To anticipate a claim, the reference must teach every element of a claim. “A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” Vergegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ 2d 1051, 1053 (Fed. Cir. 1987). “The identical invention must be shown in as complete detail as is contained in the...claim.” Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1236, 9 USPQ 2d 1913, 1920 (Fed. Cir. 1989). Since the Examiner failed to show that Lin teaches or discloses any one of the above elements, the rejection under 35 U.S.C. §102 is improper.

Therefore, Applicant believes that independent claim 1 and dependent claims 3 and 4 are distinguishable over the cited prior art references. Accordingly, Applicant respectfully requests the rejection under 35 U.S.C. §102(b) be withdrawn.

Conclusion

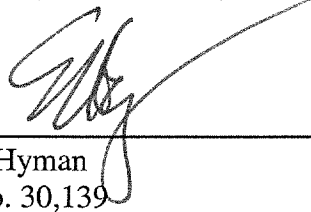
Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

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By


Eric S. Hyman

Reg. No. 30,139

Tel.: (714) 557-3800 (Pacific Coast)

1279 Oakmead Parkway
Sunnyvale, CA 94085-4040